

*Sub B1
A1*

The program selector 60 can be activated by the user and may reflect parameters such as the type of garments (e.g. silk, cotton, wool, etcetera) to be cleaned. These signals can then be incorporated into a programmed or programmable algorithm of the fuzzy logic control system 50 to determine remaining drying time.

In the Claims

Claims 1-14 (canceled).

Sub B2

15. (presently amended) A system for controlling a drying cycle in a drying apparatus comprising: a lipophilic fluid vapor, a condition detector, and a gas sensor means for sensing the concentration of a lipophilic fluid vapor present in the drying apparatus; and

a condition means operatively connected to the sensor means for activating the sensor means, wherein said condition detector is capable of activating said gas sensor and said gas sensor is capable of generating a signal representative of the lipophilic fluid vapor concentration in the dryer such that the drying cycle is controlled.

A2

16. (presently amended) A system according to Claim 15 further comprising a signal processor operatively connected to said sensor means wherein said gas sensor means cooperates with said signal processor to terminate causes said drying cycle to end.

17. (presently amended) A system according to Claim 15 further comprising a signal processor operatively connected to said sensor means wherein said gas sensor means cooperates with said signal processor to terminate causes said drying cycle to end at a when the lipophilic fluid vapor concentration that is safe for human exposure.

18. (canceled)

*Sub B2
A3*

19. (presently amended) A system according to Claim 15 further comprising a signal processor operatively connected to said sensor means wherein said gas sensor means cooperates with said signal processor to terminate causes said drying cycle to end at a when the lipophilic fluid vapor concentration of in said apparatus is less than about 40 ppm.

20-21. (canceled)

- SUB B2*
- A4*
22. (presently amended) A system according to Claim 15 further comprising a signal processor operatively connected to said sensor means wherein said gas sensor means cooperates with said signal processor to terminate causes said drying cycle to end at a when the lipophilic fluid vapor concentration of in said apparatus is less than about 10 ppm.
23. (presently amended) A system according to Claim 15 wherein said condition means is a sensor detector measures a condition selected from the group consisting essentially of a timer, fabric load a mass sensor, a temperature sensor, lipophilic a fluid flow sensor from said drying apparatus, drying apparatus drum a torque sensor, inlet drying air temperature, outlet drying air temperature, and combinations thereof.
24. (presently amended) A system according to Claim 15 wherein said gas sensor means is of the type selected from the group consisting essentially of reactive sensors, physical property sensors, sorption sensors, and combinations thereof.
25. (presently amended) A system according to Claim 15 wherein said gas sensor means is of the type selected from the group consisting essentially of electrochemical sensors, solid state semiconductor sensors, combustible gas sensors, flame ionization detectors, chemiluminescence sensors, nondispersive infrared sensors, spectroscopic sensors, photoacoustic sensors, fiber-optic sensors, microbalance sensors, conductive polymer sensors, elastomer chemiresistor sensors, reactive-gate semiconductor sensors, and combinations thereof.
26. (presently amended) A system according to Claim 15 wherein said sensor means is capable of sensing a said lipophilic fluid vapor comprises selected from the group consisting of a linear siloxane vapor, a cyclic siloxane vapor, or mixtures thereof.
27. (presently amended) A system according to Claim 15 wherein said sensor means is capable of sensing a said lipophilic fluid vapor comprises a lipophilic fluid selected from the group consisting of octamethylcyclotetrasiloxane vapor, decamethylcyclopentasiloxane vapor, dodecamethylcyclohexasiloxane vapor, and mixtures thereof.

- Sub B2*
28. (presently amended) A system according to Claim 15 wherein said sensor means is capable of sensing a said lipophilic fluid vapor comprising decamethylcyclopentasiloxane vapor.
- A4*
29. (presently amended) A system according to Claim 15 wherein said sensor means is capable of sensing a said lipophilic fluid vapor comprising decamethylcyclopentasiloxane vapor and is substantially free of octamethylcyclotetrasiloxane vapor.
30. (presently amended) A system according to Claim 15 wherein said drying apparatus is for controlling a drying cycle in a dual mode apparatus capable of washing and drying fabrics within the same drum, the system comprising:
a gas sensor for detecting a lipophilic fluid vapor; and
a condition detector operatively connected to the gas sensor for activating the gas sensor.
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- 31-32. (canceled)
- Sub B2*
33. (new) A system according to Claim 30 further comprising a signal processor operatively connected to said gas sensor wherein said gas sensor cooperates with said signal processor to terminate said drying cycle when the lipophilic fluid vapor concentration in said apparatus is less than about 40 ppm.
- A5*
34. (new) A system according to Claim 30 wherein said gas sensor is selected from the group consisting of reactive sensors, physical property sensors, sorption sensors, and combinations thereof.
35. (new) A system according to Claim 30 wherein said gas sensor is capable of sensing a lipophilic fluid vapor selected from the group consisting of a linear siloxane vapor, a cyclic siloxane vapor, or mixtures thereof
36. (new) A system according to Claim 30 wherein said condition sensor is selected from the group consisting of a timer, a mass sensor, a temperature sensor, a fluid flow sensor, a torque sensor, and combinations thereof.